

REMARKS

The purpose of this Preliminary Amendment is to eliminate multiple dependent claims in order to avoid the additional fee. Applicants reserve the right to reintroduce claims to canceled combined subject matter.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "**Version With Markings to Show Changes Made**".

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 5, 7, 10, 14-15, 20, 23-24, 26, 28-32, 40-42, 44-45, 48-49 and 51 have been amended as follows:

5. (Amended) A method as claimed in claim 3-~~or claim 4~~ wherein the library of proteins is brought into contact/association with one or more target moieties, eg target proteins.

7. (Amended) A method as claimed in claim 5-~~or claim 6~~ wherein after binding, the complexes of protein/target moiety are isolated, followed by digestion with endoprotease to release the “barcode” sequence or sequences.

10. (Amended) A method as claimed in ~~any one of claims 1 to 9~~ wherein the library of proteins is a library of antibodies.

14. (Amended) A method as claimed in ~~any one of claims 10 to 13~~ wherein the “barcode” sequence is C-terminal to the Fv sequence.

15. (Amended) A library of proteins as defined in ~~any one of claims 1 to 14~~.

20. (Amended) A method as claimed in claim 17-~~or claim 18~~ wherein the target is a complex mixture, eg a mixture of molecules, whole cells or cell membranes.

23. (Amended) A method as claimed in claim 21-~~or claim 22~~ wherein after screening for binding to the target the library is dereplicated to identify one or more proteins with a desirable property, proteins which bind to the target.

24. (Amended) A method as claimed in ~~any one of claims 21 to 23~~ where the “associating moiety” is a particle.

26. (Amended) A method as claimed in ~~any one of claims 21 to 23~~ wherein the “associating moiety” is a protein or protein complex.

28. (Amended) A method as claimed in claim 21 ~~or claim 22~~ wherein the “associating moiety” is a bispecific binding molecule capable of binding to both the proteins and genes.

29. (Amended) A method as claimed in ~~any one of claims 21 to 23~~ wherein the “associating moiety” is a living cell or cellular virus such as a bacteria or bacteriophage.

30. (Amended) A method as claimed in ~~any one of claims 21 to 29~~ wherein one or other molecules which alter the properties of the proteins in the library are bound to the “associating moiety”.

31. (Amended) A method as claimed in ~~any one of claims 21 to 30~~ wherein the genes encoding the proteins in the library are attached to the “associating moiety” prior to synthesis of the individual proteins.

32. (Amended) A method as claimed in ~~any one of claims 21 to 31~~ wherein the library of proteins is a library of antibody proteins, eg a library of antibody domains such as Fvs.

40. (Amended) A method as claimed in ~~any one of claims 37 to 39~~ wherein the library of protein binding agents is a library of antibodies or antibody fragments.

41. (Amended) A method as claimed in ~~any one of claims 37 to 39~~ wherein the protein binding agents are major histocompatibility proteins, T cell receptors and natural proteins or protein domains involved in protein-protein binding interactions, such as SH1 domains.

42. (Amended) A method as claimed in claim 40 or claim 41 wherein the library of protein binding agents is pre-selected for binding to one or more proteins or peptides derived from the protein mixture or a related protein mixture under analysis.

44. (Amended) A method as claimed in any one of claims 36 to 43 wherein the protein mixture is initially bound to a solid phase prior to digestion or cleavage either via the N or C-terminus or via specific amino acids or via specific sequences of amino acids.

45. (Amended) A method as claimed in any one of claims 36 to 43 wherein specific amino acids or modified amino acids found in the proteins are derivatised prior to binding to a solid phase, such binding occurring either before or after digestion or cleavage of the protein mixtures.

48. (Amended) A method as claimed in any one of claims 36 to 43 wherein specific naturally modified amino acids found in the proteins are bound to a solid phase using modification specific affinity reagents, such binding occurring either before or after digestion or cleavage of the protein mixtures.

49. (Amended) A method as claimed in any one of claims 45 to 48 wherein more than one cycle of digestion/cleavage and derivatisation is carried out.

51. (Amended) A method as claimed in any one of claims 36 to 50 wherein peptides released after digestion/cleavage are fractionated using physical methods such as HPLC before or after fractionation using protein binding agents.